

Orthopedic Clinical Study Gains Results with Class IV Lasers

Case Studies of High-Power Laser Therapy

Presentation by Paul Braaton, M.D. (Orthopaedics) at the Clinical Symposium of the California Orthopaedic Association.

18 y/o male with laceration injury to posterior medial structures of the right ankle.

- DOI July 2006
- Specifically the PTT, FDL, FHL, TA, and the posterior tibial neurovascular bundle
- He underwent surgical repair of the above
- The patient developed chronic neurogenic pain 7/10 in nature
- He was taking Lyrica, Narco 10, and Darvocet PRN for pain. He did not tolerate Lyrica due to side effects
- Weight bearing limited due to pain
- K-laser initiation in January 2007
 - **Duration of treatment:** January 23 through February 13th.
 - **Number of treatments:** 5
 - **Result:** Pain decreased to 2/10, patient full weight bearing without limitation.

60 y/o male who fell 8ft off of scaffolding onto feet

- DOI September 2006
- Sustained bilateral Calcaneal fractures
- Underwent bilateral ORIF
- Developed surgical wound breakdown of the lateral right foot.
- Wound care began in late October 2006
- MRSA positive cultures, treated with Bactrim DS PO
- K-laser initiation in January of 2007
 - **Duration of treatment:** January 24 through January 30
 - **Number of treatments:** 3
 - **Result:** Wound was fully epithelialized on February 7th

57 y/o female first seen in August 2006 with chronic tibialis anterior tendonitis

- MRI demonstrated inflammatory changes of the tibialis anterior at the insertion in September of 2006
- Pain was 6/10 in nature
- Previously treated by Podiatrist with Cam Walking boot with out relief
- She was treated with a short leg walking cast for 2 weeks with transition to an Aircast cam walking boot as she refused any further casting
- Patient spent 6 weeks in Air cast Cam walking boot and was symptom free.
- Upon transition into motion controlled shoes and physical therapy her symptoms returned

- K-laser initiated in January 2007
 - **Duration:** January 30 through February 13
 - **Number of treatments:** 4
 - **Result:** Pain 0/10, symptom free with all activities. Has returned to Hiking and horse back riding

48 y/o male with Pes Cavus deformity, chronic right ankle instability and arthritic spurring, and chronic peroneal tendon degeneration

- Underwent Pes Cavus surgical reconstruction in July 2006
- Underwent surgical reconstruction of the peroneal tendons and lateral ligamentary complex in August of 2006
- Physical therapy began in late October 2006
- In early January the patient continued to complain of pain over the peroneal tendons, ankle ROM limited to 10 degrees dorsiflexion and 30 degrees plantar flexion with chronic low grade swelling despite aggressive PT and lymphedema management
- K2 laser initiation in January 2007
 - **Duration:** January 25 through February 1st
 - **Number of treatment:** 6
 - **Result:** Ankle plantar flexion improved to over 45 degrees, significant reduction of swelling and pain

33 y/o male with an OCD lesion of the talus, chronic ankle instability, and arthritic spurring of the ankle

- Underwent an OATS procedure of the right ankle with osteochondral graft harvest from the right knee with retinacular release in February 22nd, 2007
- At the first post operative visit on March 6th, 2007 he had significant ecchymosis of the ankle, swelling and pain with passive range of motion
- He also had 2+ knee effusion with marked ecchymosis and pain with passive range of motion. Range of motion was limited in the knee
- Brostrom reconstruction scheduled for March 22nd, 2007
- K-laser initiated immediately post-op of the knee and ankle on March 6th
 - **Duration of treatment:** March 6th through March 15th
 - **Number of treatments:** 4
 - **Result:** Upon return on March 19th, he had full range of motion of both the ankle and knee, the effusion, swelling, ecchymosis and pain had completely resolved. Range of motion both active and passive of the ankle and knee were full and with out discomfort.

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